

Amendments to the Specification:

Please amend paragraph [0584] of the publication of the application as follows:

The training population collected in step 202 was used in order to identify combinations of genes that can serve as a classifier to differentiate mild osteoarthritis from non-osteoarthritis. Thus, the classifiers developed in this example are designed to yield a positive score when they predict that a subject has mild osteoarthritis and a negative score when they predict that the subject is in the control population. Using the approach described in Section 5.1, two specific classifiers were developed: 100000252 and 100000511. Classifier 100000252 comprises six genes and has the format: $\text{SCORE} = -1.839 + 0.8 * \text{HSP90AA1} - \text{HSPCA} - 1.5525 * \text{IKBKAP} + 1.10184 * \text{IL13RA1} + 0.78923 * \text{LAMC1} - 1.3974 - * \text{MAFB} - 1.0602 * \text{PF4}$.

Please amend paragraph [0585] of the publication of the application as follows:

Classifier 100000511 comprises nine genes and has the format: $\text{SCORE} = -4.3754 + 0.10276 * \text{EGR1} - 1.1697 * \text{G2AN} + 0.88767 * \text{HSP90AA1} - \text{HSPCA} - 0.55785 * \text{IKBKAP} + 0.940 - 15 * \text{IL13RA1} + 0.67515 * \text{LAMC1} - 1.5068 * \text{MAFB} + 1.0798 * \text{PF4} + 0.4007 * \text{TNFAIP6}$.

Please amend paragraph [0586] of the publication of the application as follows:

Here, EGR1, G2AN, HSP90AA1, ~~HSPCA~~, IKBKAP, IL13RA1, LAMC1, MAFB, and TNFAIP6 are genes that were identified in step 204 and validated in step 208 (Section 5.1) for their ability to discriminate between subjects that have mild osteoarthritis and subjects that do not have osteoarthritis.

Please replace Table 4C with the amended Table 4C (clean version) attached as Appendix A. A marked up version of Table 4C showing the amendments made to the table is attached as Appendix B.

Please replace Table 4D with the amended Table 4D (clean version) attached as Appendix C. A marked up version of Table 4D showing the amendments made to table is attached as Appendix D.